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Where Does It Stand?

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The current era of evidence-based practices demands that programs document that they are making a difference in the lives of infants, toddlers, and their families. As states and communities make difficult decisions about how to allocate limited resources to address growing needs of vulnerable families, policymakers are asking program managers one fundamental question: “Does it work?” Two published reviews of the state of the evidence for the impact of early childhood mental health consultation (ECMHC) provided some basis for believing the answer was “yes” (Brennan, Bradley, Allen, & Perry, 2008; Perry, Allen, Brennan, & Bradley, 2010). But these reviews also pointed to some of the limitations in the available studies—including few randomized controlled trials, lack of comparison groups, and reliance on measures that were not developed to test the effects of ECMHC on teachers, children, and classrooms.

Since the publication of those two reviews, a growing number of researchers have partnered with states and communities who are implementing ECMHC within early care and education settings to gather more rigorous data to address this question. A group of providers, researchers, and evaluators associated with several ECMHC programs met in Arizona in June 2012 (See box Statewide Early Childhood Mental Health Consultation Programs) to share their interest in and current efforts to contribute to the evidence-base for

ECMHC. This article draws upon some of the findings from seven statewide programs and their evaluation to provide the field with a snapshot of where we are in assessing the effectiveness of different ECMHC programs.

Does ECMHC Work?

GILLIAM & LEITER (2003) articulated a series of important questions that underscore the complexity hidden behind that seemingly simple question posed by policymakers. To really answer the

question “does ECMHC work” requires a clear understanding of:

1. what ECMHC is;
2. what is the theory of change about how ECMHC leads to improved outcomes;
3. which outcomes can be expected to change if ECMHC is implemented well; and
4. what are the best measures of those outcomes?

Abstract

This article reviews the current evidence base for the effectiveness of early childhood mental health consultation (ECMHC). Comprehensive program evaluations of ECMHC include a number of elements such as a theory of change, a defined program logic model, and tools to measure outcomes at multiple levels: child, teacher, classroom, program, and family levels. Seven statewide programs with strong program evaluations illustrate current research efforts and contributions to the evidence base.

STATEWIDE EARLY CHILDHOOD MENTAL HEALTH CONSULTATION PROGRAMS

Seven statewide early childhood mental health consultation programs share evaluation data on the effectiveness of their services. These programs, listed by state and program name, include:

- Arizona: Smart Support
- Arkansas: Project PLAY
- Connecticut: Early Childhood Consultation Partnership
- District of Columbia: Healthy Futures
- Louisiana: Quality Start Early Childhood Mental Health Consultation
- Maryland: Maryland Early Childhood Mental Health Consultation Project
- Michigan: Child Care Expulsion Prevention

We address each of these in turn in this article and then synthesize some of the findings from the evaluations of these programs.

Is There a Commonly Agreed Upon Definition of ECMHC?

A widely disseminated document, *Early Childhood Mental Health Consultation* (Cohen & Kaufmann, 2000, rev. 2005) put forth a definition of ECMHC, which was derived from a consensus-building meeting that engaged a variety of practitioners, policymakers, and leaders in the fields of early childhood and mental health. The definition emphasized the ongoing, collaborative relationship between a mental health consultant and caregivers (i.e., early childhood staff and family members) and identified two types of consultation—child- or family-centered consultation and programmatic consultation. In both types of consultation, the goal is to build the capacity of staff, families, and programs to support the social-emotional development of young children, address concerns about an individual child, or improve practices that affect more than one child and family. This definition has been widely used to guide the early and ongoing development of ECMHC programs. (See Kaufmann, Perry, Hepburn, & Hunter, this issue, p. 4, which reviews the evolution of this definition during the past decade.) This definition can also inform the development of a theory of change for ECMHC.

What Is an ECMHC Theory of Change?

Carol Weiss (1972) popularized the term *theory of change* as a way to describe the set of assumptions that explain both the steps that lead to the long-term goals of interest

ARIZONA'S THEORY OF CHANGE FOR SMART SUPPORT

Arizona's Smart Support evaluation team, led by Dr. Eva Marie Shivers at the Indigo Cultural Center, worked in partnership with the program developers at Southwest Human Development. The team designed their research on the basis of the program developers' theory of change and child care research on effective early childhood mental health consultation (ECMHC) models (Duran et al., 2009; Florida State University, 2006; Gilliam, 2007; Green, Everhart, Gordon, & Gettman, 2006; Johnston & Brinamen, 2006). In alignment with their approach to collaborating in research with community partners, evaluators at the Indigo Cultural Center assumed that Smart Support leadership team and staff as well as key stakeholders are experts with important knowledge and perspectives and needed to be engaged in the evaluation process. At the beginning of the project year, the Smart Support leadership team convened to develop a theory of change for the Smart Support Program. The Smart Support leadership team included the Smart Support project director, project coordinator, senior managers, and the evaluation partner. The evaluation partner for Smart Support, Indigo Cultural Center, uses a community-based participatory approach to research and evaluation, and helped facilitate a conversation about the theory of change in conjunction with the development of the Smart Support logic model—as recommended in the ECMHC Evaluation Toolkit (Hepburn et al., 2007). The Smart Support leadership team came up with the following theory of change based on their program's framework, rooted in attachment theory and the parallel process:

Through the development of trusting relationships with early childhood administrators and staff, we hope to change professional thinking and practice to the benefit of the children in their care.

Through the experience of a supportive, dependable relationship with the mental health consultant and the development of a shared language, we believe child care providers will be better equipped to adopt a stance of:

- Curiosity about the meaning of children's behaviors;
- Flexibility in thinking about young children's needs;
- Emotional availability to the children in their care;
- Openness to new information;
- Respect for self as a professional. (Johnston & Brinamen, 2006)

and the connections between program activities and outcomes that result. A theory of change describes the mechanisms that undergird the intervention's impact on proximal and distal outcomes. A well-articulated theory of change enables researchers to develop research questions and identify variables that need to be measured in order to support or refute hypothesized links among inputs and outcomes.

For ECMHC, many of the theories of change are undergirded by other broader theories and constructs from psychology and education such as:

- attachment theory;
- clinical and therapeutic intervention (e.g., parallel process, internal representation, building reflective capacity);
- organizational psychology;
- family systems; and,
- adult learning principles and skill acquisition.

Having a theory of change makes it easier for researchers to test their hypotheses and guide assumptions about how and why

they think ECMHC is effective (or not). From a practical point of view, going through the exercise of developing, refining, and promoting a theory of change enables program leadership and staff to articulate the “what,” “why,” and “how” of ECMHC. See box Arizona's Theory of Change for Smart Support for an example of a theory of change.

Often people have trouble distinguishing a logic model from a theory of change. Both are helpful tools for evaluators, their program partners, and other stakeholders in the community in structuring how the evaluation and ECMHC program staff work toward measuring effectiveness. In its simplest form, a logic model is a tool that graphically depicts the connections between and among a program's goals, participants, intervention activities, short-term outcomes, and long-term outcomes. Common components of a logic model include: a description of the target population, guiding assumptions, program activities, and outcomes (Hepburn et al., 2007; Perry, Woodbridge, & Rosman, 2007). The theory of change is often depicted as the arrows in a logic model—connecting intervention elements to changes



Studies investigating job-related stress found an association between early childhood mental health consultation and a reduction in job-related stress for teachers.

in knowledge, attitudes, or behaviors of teachers, which then lead to changes in children's behavior.

What Outcomes Can Be Expected to Change, and How Are They Measured?

Comprehensive program evaluations of ECMHC usually measure outcomes at multiple levels: child, teacher, classroom, program, and family levels. During the last decade, the majority of ECMHC evaluations were conducted in early care and education settings; as a result, many of the outcomes were measured for individual teachers or children who received ECMHC. More recently, researchers have broadened their focus to also examine the impact of ECMHC on the quality of the child care classrooms. In this same time frame, research on child care organizational quality has linked the quality of the organization's functioning at the administrative level with classroom-, teacher-, and even child-level outcomes (Bella & Bloom, 2003; Bloom & Sheerer, 1992; McCormick Center for Early Childhood Leadership, 2011).

Collecting outcome data at each level in a child care organization demonstrates that ECMHC is most effective when delivered at multiple levels. For example, a director's understanding of early childhood mental health principles impacts how supportive she is of her staff as they work to implement strategies and recommendations of their mental health consultant. In addition, the emotional climate of a classroom (something

which mental health consultants work on directly in programmatic consultation) can impact teachers' cooperation with one another and their emotional availability and capacity to develop harmonious relationships with children. When teachers and administrators work well with families, children are the ones who ultimately benefit. By measuring outcomes at all these levels, researchers can start to develop a more nuanced understanding of how and why ECMHC is effective as well as the barriers that can emerge in having the desired impact.

Identifying measures for outcomes at all these levels can be challenging. Ideally programs will use standardized measures—those that have the best reliability (yield consistent results without much error) and validity (accurately reflect what is being measured; Hepburn et al., 2007). Consideration must be given to measures that are compatible with the setting where ECMHC is being delivered (e.g., early care and education, home visiting), and the participants in the program (e.g., age, language, culture). Strong evaluations often

combine a variety of measures including: implementation or process data, as well as outcome or impact measures; and these may be either qualitative (open-ended) or quantitative (statistical) in nature. Finally, the ideal condition is where the evaluation measures are completely (and seamlessly) integrated into the ongoing operations of the program—such, so-called “green evaluations” provide the consultants and program staff with information that informs their interventions while also providing the evaluators with data to measure change over time in implementation and outcomes.

As ECMHC evaluators and program managers better articulate their theories of change, there is a need to expand the types of measures used to assess important constructs. For example, when program leaders at Arizona's Smart Support program articulated the teachers' internal representation of the child as a critical target of the ECMHC work with the teacher, they had to find a reliable and valid way to measure this construct (see box Innovations in Measurement of Early Childhood Mental Health Consultation).

INNOVATIONS IN MEASUREMENT OF EARLY CHILDHOOD MENTAL HEALTH CONSULTATION

Brennan and her colleagues (2005) noted that there are few reliable and valid tools available to measure the pathways through which mental health consultation may affect children's behaviors, such as the quality of the relationship between the teacher and the child or the teacher's internal representation of the child. Arizona's Smart Start program adapted the Working Model of the Child Interview (WMCI; Zeanah, Benoit, Hirshberg, & Barton, 1993) to measure these pathways and its use is described below.

The WMCI (Zeanah et al., 1993) is a structured interview that was originally designed to assess parents' internal representations or working models of their relationship to a particular child. The WMCI has been used for clinical and research purposes in the U.S. and other countries. It is most often used with high-risk samples, but it has proven widely applicable from low-risk to clinical populations. Because of its relevance to tapping into internal representations of relationships, Smart Support leadership saw a direct connection with its own theory of change and developed an adaptation of the WMCI for child care providers and preschool teachers (with permission from Dr. Zeanah).

Smart Support mental health consultants conduct the WMCI during their first 6 weeks of consultation. Consultants make every effort to provide a setting for the interview that is comfortable enough to allow for attention to the questions posed and a relaxed atmosphere that permits teachers opportunity for reflection. The WMCI typically takes about half an hour to complete.

Part of the original WMCI protocol that was retained includes teachers' descriptions of the (focus) child through the provision of five adjectives, and teachers' descriptions of their relationship with the (focus) child through the provision of an additional five adjectives. Although the WMCI is primarily a clinical intervention tool, Smart Support mental health consultants are instructed to record and turn in the two sets of adjectives describing the child and the teacher's relationship with the child. The WMCI is then repeated after 6 months of Smart Support services and then again after 12 months of Smart Support services. Adjectives are recorded and turned in to the evaluation team at those time points as well. The working hypothesis is that the tenor of the adjectives will change over time and will be associated with other variables in the evaluation. The Smart Support evaluation team is currently developing a coding scheme for analyzing the adjectives collected at the three different time points.

How Is ECMHC Being Implemented and Evaluated

IN ORDER TO address the questions of which outcomes to target and how to measure those outcomes, we turn to the literature of already completed evaluations of ECMHC. In 2009, Duran and colleagues conducted a national survey that documented more than half of all states reported having ECMHC services available throughout the state. Since the publication of that survey, other states have started statewide ECMHC (e.g., Arizona) and efforts to expand ECMHC to other settings and sectors through federally funded initiatives such as Project LAUNCH. Funded by the Substance Abuse and Mental Health Services Administration, Project LAUNCH supports community and state efforts to enhance early childhood mental health promotion and prevention—including the implementation of ECMHC. Many of these efforts have evaluation components and are adding to the collective knowledge about the impact of ECMHC.

Below are descriptions of seven statewide ECMHC programs, each with a strong evaluation partner. A list of the resources associated with each program is provided in the Learn More section on page 17.

ECMHC Statewide Program Snapshots

Arizona's Smart Support launched its services with funding from Arizona's early childhood and health system—First Things First. The program, administered by Southwest Human Development, delivers consultation services to 13 regions in the state with support from the local First Things First Regional Partnership Councils. The two main goals of Smart Support are: (a) to improve the overall quality of early care and education settings so that they are able to help support the social and emotional development of all children in their care, and (b) to increase the capacity of early care providers to address the mental health needs and challenging behaviors that place particular children at risk for negative outcomes in the early years of life. The evaluation design can be described as primarily a summative outcome evaluation.

Arkansas' Project PLAY began as a state-initiated pilot demonstration project in and over time, expanded from three regions to six regions (statewide). Funded by Arkansas' Department of Humans Services, Division of Child Care and Early Education through their Child Care Development Fund, Quality Initiative, Project PLAY facilitates collaboration between community mental health centers and early education programs through consultation services. The primary goals of this project are to (a) enhance the capacity of child care centers and teachers to



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During the last decade, the majority of early childhood mental health evaluations were conducted in early care and education settings.

prevent and manage mental health problems in children and (b) improve the outcomes of children enrolled in child care. This two-phase intervention model, research, and evaluation design can be described as quasi-experimental involving intervention and comparison sites, using pre- and post-intervention assessments.

Connecticut's Early Childhood Consultation Program (ECCP) was created through a combination of public and private funds, but it is now funded almost solely by the Department of Child and Families, the state's child protection agency. Services are provided on request and free of charge to any early care and education program serving children birth to 5 years old anywhere in the state of Connecticut. ECCP is managed by Advanced Behavioral Health, a nonprofit behavioral health management company, using a centralized information management system. Services are manualized and menu-driven, and they focus on both classroom- and child-specific consultation provided during a 3-month period of service. The goal of ECCP is to reduce suspension and expulsion rates of young children by building the capacity of caregivers and parents to create together socially and emotionally healthy environments for young children. ECCP has been evaluated in one statewide random-controlled trial, and data from two additional random-controlled trials (one with preschool settings, one with infant-toddler settings) are currently being analyzed.

The District of Columbia's Healthy Futures program was initiated by a white paper commissioned by the Mayor's Advisory Council for Early Childhood Development

which led to a plan for ECMHC developed by the Department of Mental Health. Initial funding for the program came from two sources: the Deputy Mayor of Education's Office and the federal Mental Health Services Block Grant. A partnership with the Department of Health accessed federal grant dollars from the Substance Abuse and Mental Health Services Administration through Project LAUNCH. Healthy Futures offers ECMHC services to 24 child development centers throughout the District of Columbia. The primary goals of this project are to promote child care quality, child development, and school readiness. Healthy Futures' evaluation relies on a quasi-experimental design using pre- and post- (year-end) assessments.

In Louisiana, Tulane University's Quality Start Mental Health Consultation Program was initiated and implemented as an integral part of the state's Quality Rating System for child care. Funded through their federal Child Care and Development Fund, the project is designed to assist all children in center-based care through (a) promotion of the social and emotional health of young children, (b) support for teacher's promotion of healthy child development within classroom settings, and (c) referral for treatment or design interventions for children exhibiting behavioral problems. The research and evaluation design can be described as quasi-experimental, comparing two groups of study participants using pre- and post-intervention assessments.

Maryland's ECMHC Project began as a 3-year pilot program in Baltimore City and on the Eastern Shore. On the basis of the pilot project's success as shown in the program evaluation, the Maryland State Department

of Education funded the expansion of the ECMHC Pilot Project statewide to the 12 child care licensing regions. The Project's goals are to: (a) promote positive social-emotional wellness practices in early childhood settings; (b) identify and work proactively with children who may have developmental, social, emotional, or behavioral concerns; (c) refer children and families in need of more intensive mental health services to appropriate support or clinical programs; (d) help children remain in stable, quality child care arrangements that support their individual needs; (e) increase teacher confidence and competence dealing with challenging behaviors; and (f) build close partnerships with local community resources. Maryland's research and evaluation design can be described as a quasi-experimental mixed-methods design. Within the evaluation, there were three unique studies: Service Description Study, Impact Study, and an Exit Study, which explored factors related to expulsion.

Michigan's Child Care Expulsion Prevention program was established by the Michigan Department of Community Health with the support of funding by the Michigan Department of Human Services in the late 1990s. The program grew to serve 31 of Michigan's 83 counties with the intention of becoming a statewide program. Managed by the Michigan Department of Community Health, and funded with Child Care Development Funds, Child Care Expulsion Prevention services have been supported and delivered by Community Mental Health Services Programs. The primary goals of this program are to (a) reduce expulsions, (b) improve the quality of child care, and (c) increase the number of parents and providers who successfully nurture the social-emotional development of infants, toddlers, and preschoolers. The program's evaluation consisted of a mixed-method evaluation design. Methods include: A longitudinal study, a quasi-experimental comparison study, case studies, and an on-line cross-sectional survey.

How Are ECMHC Outcomes Being Measured?

THE SEVEN EVALUATION teams associated with the programs described in the previous section used the constructs and measures to examine the impact of ECMHC outlined in Table 1. The table indicates the level at which the measure was used, the measure name, and a brief description of the measure.

Outcomes of ECMHC

THE EVALUATION REPORTS produced by each of the seven programs described above were reviewed to examine the

Table 1: Evaluation Constructs and Measures

	ECMHC Programs	Measured By
Children's Behavior		
	AZ, AR, DC MD, MI	Devereux Early Childhood Assessment (DECA; LeBuffe & Naglieri, 1999; DECA-IT; Mackrain & LeBuffe, 2007; DECA-C; LeBuffe & Naglieri, 2003) is a series of instruments that measure the mental health of infants (1–18 months old), toddlers (18–36 months old), and preschoolers (3–5 years old) in the areas of initiative, self-regulation/self-control, and attachment.
	MI	The Behavior Assessment System for Children, Second Edition (BASC-2; Reynolds & Kamphaus, 2004) is a teacher- or parent-administered instrument examining a child's observable behavior, including both adaptive and problem behaviors as well as internalizing and externalizing problems.
	CT	Conners' Teacher Rating Scale–Revised Long Form and Conner's Parent Rating Scale–Revised Long Form (CTRS, CPRS; Conners, 1997) are teacher- and parent-rating forms that measure externalizing behaviors associated with oppositional behaviors and hyperactivity, internalizing behaviors associated with anxious-shy behaviors and perfectionism, and social problems.
	CT	Preschool Social Behavior Scale (PSBS; Crick, Casas, & Mosher, 1997) is a 19-item teacher-report scale used to measure relational aggression in preschoolers.
	CT	Social Skills Rating System (SSRS; Gresham & Elliot, 1990) is a teacher- and parent-rating scale that measures both behavior problems (externalizing and internalizing) as well as social skills (cooperation, assertion, and self-control).
	CT	Infant-Toddler Social Emotional Assessment and Brief Infant-Toddler Social Emotional Assessment (ITSEA and BITSEA; Carter & Briggs-Gowan, 2006) measure externalizing, internalizing, dysregulation, and competence behaviors in young children 12–36 months old.
	MD	The Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997) This instrument is a brief screening questionnaire completed by parents or teachers examining a child's emotional symptoms, conduct problems, hyperactivity/inattention, peer relationship problems, and prosocial behavior.
Internalizing	MI	BASC-2™ (see description above)
	CT	CTRS, CPRS (see description above) SSRS (see description above)
	CT	ITSEA and BITSEA (see description above)
Prosocial Skills	AZ, AR, DC, MD, MI	DECA, DECA-IT, DECA-C (see description above)
	DC	Ages & Stages Questionnaires®: Social Emotional, (ASQ-SE; Bricker & Squires, 1999) . This parent-completed screening tool is designed to identify children who may be at risk for social or emotional difficulties using questions related to a child's behavior and social interactions.
	CT	SSRS (see description above)
	CT	ITSEA and BITSEA (see description above)
Expulsions		
	AZ, CT	Preschool Expulsion Risk Measure (Gilliam, 2010) : This instrument measures risk for expulsion on the basis of the teacher's perception of how a specific child's behavior impacts the teacher's work and the perceived likelihood that the child's behavior can improve.
	CT, DC, MD, MI	Exit Interviews, Expulsion Tracking and Analysis developed by the evaluation teams.

Continued

Table 1: Evaluation Constructs and Measures *Continued*

Teachers' Beliefs, Feelings, and Behaviors		
Efficacy/ Confidence	AZ, LA, MD, MI	Teacher Opinion Survey (Geller & Lynch, 1999): This self-reported attitudes and beliefs survey examines teacher's perceived skills at managing difficult behavior and sense of hopefulness about their role as teacher.
Behavior Management	MI, DC, MD, LA	Goal Achievement Scale (Alkon, Ramler, & MacLennon, 2003): This self-report instrument used by center administrators or teachers includes 13 items that examine behavioral changes in a teacher's ability to manage children (especially with challenging behavior) and work with families as well as assess changes in center or classroom climate.
Stress	AZ, CT, DC	Child Care Worker Job Stress Inventory (Curbow, Spratt, Ungaretti, McDonnell, & Breckler, 2000): This self-reported survey examines a child care worker's stress including the worker's perceptions of job demands, job control, and job resources that may help contribute to a worker's job satisfaction or positive feelings about his own work.
Depression	CT	Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977) : The CES-D is one of the most widely used self-report measures of depressive symptoms in adults. It has high known-group and concurrent validity, and support has been found for its use across groups of different ethnicities.
Interaction	AR, CT	Arnett Caregiver Interaction Scale (Arnett, 1989): This scale, used by an outside observer to rate a caregiver's attitudes toward children and their behavior in interactions with children, examines positive interaction, punitiveness, detachment, and permissiveness.
Perceived Interaction	AZ	Pianta's Student-Teacher Relationship Scale (Pianta, 1992) measures teacher-perceived teacher-child interactions. The two constructs that the STRS measures are closeness and conflict.
Classroom		
Social- Emotional Climate	AZ, CT, DC, MD	Preschool Mental Health Climate Scale (PMHCS; Gilliam, 2008) : This instrument, used by an outside observer to evaluate the mental health climate of preschool classrooms, examines child care quality on the basis of multiple environmental dimensions including transitions, directions and rules, staff awareness, staff affect, staff cooperation, teaching feelings and problem-solving, individualized and developmentally appropriate pedagogy, and child interactions.
	CT, DC, LA	The Classroom Assessment Scoring System™ (CLASS™ PreK, 2; Pianta, La Paro, & Hamre, 2008) This instrument, used by an outside observer to assess teacher-student interactions in early care and education settings, examines teacher sensitivity, emotional support, classroom organization, and instructional support that include multiple dimensions such as positive climate, negative climate, teacher sensitivity, and regard for student perspective, behavior management, productivity, and instructional learning.

patterns in the findings. These reports are listed in the Learn More section on page 17. This research and two other published reviews of the ECMHC identified the following outcomes for ECMHC programs:

Reductions in Children's Challenging Behaviors

One of the most consistent findings in Perry and colleagues' published review (2010) of the ECMHC literature was that ECMHC was associated with reductions in externalizing behaviors. This was true whether the children's challenging behavior

was reported by the teachers or rated independently by an external observer. In the more recent studies we identified for this review, this finding was repeated. In the Michigan Child Care Expulsion Prevention program, using the DECA, DECA-IT (LeBuffe & Naglieri, 1999; Mackrain & LeBuffe, 2007), and subscales from the BASC-2 (Reynolds & Kamphaus, 2004) as measures, they reported a decrease in children's hyperactivity and attention problems. The results for children served in the Connecticut ECGP, District of Columbia Healthy Futures Maryland Early Childhood Mental Health Project,

and Project PLAY programs were similar. Their outcomes showed decreased behavior concerns for those children identified with problem behaviors measured by DECA scores—including children with identified individual concerns in the clinical range using the DECA-C. The Maryland evaluation also reported that beyond any individual child, the impact of the intervention also reduced the overall level of problem behaviors in the classroom, measured by Strengths and Difficulties Questionnaire (Goodman, 1997). This measure was completed by teachers who reported on the behavior of all of the children in their classroom as a whole group; the children were not identified as individuals. Rather, the teacher rated each child anonymously at baseline and 4 months later—indicating which children were exhibiting behaviors that interfered in her ability to teach. And after receiving 4 months of on-site consultation, the teachers' perceptions of the rates of problem behaviors in these classrooms decreased significantly.

Perry et al. (2010) found that far fewer studies looked at internalizing behavior as a main outcome for ECMHC—in part perhaps because it is children who are acting aggressively who are more likely to be referred for child-specific ECMHC. The recent studies continued this trend. The majority of the studies that looked at child-level outcomes were using one or more forms of the DECA (LeBuffe & Naglieri, 1999, 2003; Mackrain & LeBuffe, 2007). And while the DECA instruments do gather information about internalizing behaviors, most evaluation studies did not report outcomes specific to internalizing behaviors. It could be that there were too few children who scored in the clinically significant range to warrant reporting these scores. This continues to be an area where increased outreach to teachers and families is warranted to alert them to the importance of attending to the concerns of young children who are excessively anxious, withdrawn, depressed, or any combination of these.

Improvements in Children's Pro-Social Behaviors

In addition to reductions in challenging behavior, Perry et al. (2010) reported that ECMHC was associated with increased positive social and emotional outcomes for young children. More than half of the studies reviewed in that synthesis reported positive pro-social behaviors including social skills, communication, social interactions, cooperation, self-control, play and leisure time, coping skills, interpersonal relationships, initiative, and attachment. Three of the recent studies, in Michigan, Maryland, and the District of Columbia, also reported increases



Many programs have been concerned about the disproportionate rates of expulsion from preschool classrooms.

in social skills, social-emotional functioning, and protective factors for children who received consultation intervention. These outcomes were measured by DECA (LeBuffe & Naglieri, 1999, 2003; Mackrain & LeBuffe, 2007) scores collected for children who were receiving child-specific ECMHC.

Reduced Expulsions

Many programs have been concerned about the disproportionate rates of expulsion from preschool classrooms documented in the landmark study by Gilliam (2005). Data from this study estimated the national rate of expulsions as 6.7 per 1,000 served in pre-kindergarten and served as a catalyst for many ECMHC programs across the country. Gilliam and Shahar (2006) found an association between ECMHC and reduced rates of expulsions. Similar positive outcomes were reported by three of the recent studies. Expulsions were tracked in Michigan, Maryland, and the District of Columbia. In both the District of Columbia and Maryland, programs tracked the number of children who were expelled from child care programs receiving ECMHC; and for both programs, the number of children expelled per number served by the ECMHC project was below the national average published by Gilliam in 2005. Maryland and the District of Columbia also conducted qualitative studies of some of the factors associated with expulsion; and they both reported that these children are far more likely to have complicated family lives, with mental health, substance abuse, and

incarcerated parents being identified as risk factors.

Improvements in Teachers' Efficacy/Confidence

Teacher self-efficacy is defined as perceived operative capability (Bandura, 2007) or a teacher's confidence in her ability to work with children in their classroom, even those with difficult behavior, and perform her job as a teacher. Brennan et al. (2008) reported that the studies they reviewed showed an improvement in teachers' attitudes and self-perceptions when they received ECMHC. Teachers indicated an increased confidence in addressing the social-emotional needs of children, working with children and families, and managing their duties. Teacher efficacy and confidence was a focus of three of the recent studies with similar results in Arizona, Louisiana, and Michigan. Using measures such as the Goal Achievement Scale (Alkon et al., 2003) and the Teacher Opinion Survey (Geller & Lynch, 1999), these studies found that ECMHC increased teacher efficacy and teacher competence in the areas of social-emotional development and ability to respond to children and deal effectively with conflicts.

Improved Teachers' Skills

In addition to self-reported confidence in their ability to do their job, Brennan et al. (2008) noted that teachers reported specific skills and behavior changes associated with receiving ECMHC. Teachers reported

positive results in the areas of improved skills in classroom management, interactions with children and parents, and increased parent involvement in improving their child's behavior. These results were echoed in the statewide evaluations reviewed for the current synthesis. Teachers reported increased awareness of social-emotional aspects of development, being better able to manage challenging behaviors, and increased knowledge and comfort with referring children and families for mental health services. In Louisiana, teachers reported being better able to support children's social-emotional development as a result of ECMHC services, regardless of teacher, consultant, or center characteristics. In Michigan, providers reported being better able to recognize early warning signs of developmental, social-emotional, and behavioral concerns as a result of higher dosage (more hours) of ECMHC services. In the District of Columbia, child care center directors reported that classroom staff had an increased ability to manage challenging behavior and an increased positive attitude about working together with parents.

Reduced Teacher Stress and Turnover

Previous studies investigating job-related stress found an association between ECMHC and a reduction in job-related stress for teachers, and research has shown that teacher job stress is a strong predictor of expulsion rates (Gilliam & Shahar, 2006). In their published review, Brennan et al. (2008) reported teachers receiving ECMHC report feeling less stressed and lower levels of burnout. A related finding noted that consultation was also associated with reduced numbers of staff leaving programs and a lower level of staff turnover. In addition, one study reported that higher self-reported levels of staff wellness were associated with higher quality relationships with consultants and more frequent program and individual consultation (Green et al., 2006). Arkansas and the District of Columbia's evaluations both examined the impact of ECMHC services on teacher stress. Both evaluations found results that were consistent with the previous research synthesis: teachers who received ECMHC reported feeling less stress from baseline to follow-up. In addition, in Arkansas researchers found that teachers who received ECMHC reported a decreased intention to leave the profession of child care.

Teacher-Child Interactions

Arizona and Arkansas included teacher-child interaction measures to track changes in relationships over time. Arizona's evaluation used Pianta's Student Teacher Relationship Scale—Short Form (1992) to measure

teachers' perceptions of their relationships with focus children. This teacher-report measure blends attachment theory with research on the importance of early school experiences in determining concurrent and future success in school (Pianta & Nimetz, 1991). The Arizona evaluation team reduced items on the Short Form to two commonly published subscales: Closeness and Conflict (Pianta, 1992), and found increases on the Closeness subscale and decreases on the Conflict subscale after 6 months of ECMHC intervention. The Arkansas evaluation team used independent raters and the Arnett Caregiver Interaction Scales (Arnett, 1989) to assess several dimensions of teacher-child interactions. They reported strong positive effects including significant reductions in punitiveness and detachment, and improvements in positive interactions associated with ECMHC.

Improved Classroom Climate

Early studies that attempted to link the improvements in the quality of child care to ECMHC relied on the Early Childhood Environmental Rating Scales (ECERS; Harms, Clifford & Cryer, 1998). The findings were mixed, perhaps in large part because of the fact that this tool was not sensitive enough to assess some of the changes that are thought to occur through the work of a mental health consultant. As a result, Gilliam (2008) developed and pilot-tested a new measure that was designed specifically to tap the domains that ECMHC impacts through consultation work. On the basis of this foundational work, many evaluators requested permission to use the Preschool Mental Health Climate Scale (PMHCS) including Arizona, the District of Columbia, and Maryland. All of the research teams reported consistent, strong positive results using this observational instrument. Teachers improved in their interactions to support social and emotional development, showed increased teaching about feelings and emotional problem-solving skills, and other interactions related to classroom quality.

Another important measure of the quality of the classroom climate is the CLASS (Pianta et al., 2008) used to assess teacher-child interactions and examine teacher sensitivity, emotional support, and classroom organization that impact the social, emotional, and educational experience of young children. This measure was used in Louisiana and in the year 2 evaluation in the District of Columbia and administered by a trained research assistant not associated with the child care program or the provision of ECMHC. Both evaluations reported significant improvements in the many of the domains included in the emotional support and classroom organization subscales.

Learn More

These resources provide additional information about the seven early childhood mental health consultation programs highlighted in this article. There are also links to the evaluation reports, where available.

Arizona

SMART SUPPORT PROGRAM

www.swhd.org/training/early-childhood-training/smart-support
www.IndigoCulturalCenter.org

SMART SUPPORT: ARIZONA'S EARLY CHILDHOOD MENTAL HEALTH CONSULTATION SYSTEM—YEAR 1 EVALUATION REPORT, 2010–2011

E. M. Shivers (2012)

Phoenix, AZ: Institute for Child Development Research & Social Change, Indigo Cultural Center, Inc.

Arkansas

PROJECT PLAY

<http://familymedicine.uams.edu/ProjectPLAY>

EARLY CHILDHOOD MENTAL HEALTH CONSULTATION: PROMOTING CHANGE IN THE QUALITY OF TEACHER-CHILD INTERACTIONS

<http://onlinelibrary.wiley.com/doi/10.1002/imhj.21358/>

IMPROVED CLASSROOM QUALITY AND CHILD BEHAVIOR IN AN ARKANSAS EARLY CHILDHOOD MENTAL HEALTH CONSULTATION PILOT PROJECT

<http://onlinelibrary.wiley.com/doi/10.1002/imhj.21335/abstract>

Connecticut

EARLY CHILDHOOD CONSULTATION PARTNERSHIP RESULTS OF A RANDOM-CONTROLLED EVALUATION: FINAL REPORT AND EXECUTIVE SUMMARY

www.chdi.org/download.php?id=76

District of Columbia

HEALTHY FUTURES: YEAR ONE IMPLEMENTATION AND EVALUATION

http://dmh.dc.gov/sites/default/files/dc/sites/dmh/publication/attachments/Healthy_Futures_Year_One_Report.pdf

Louisiana

QUALITY START EARLY CHILDHOOD MENTAL HEALTH CONSULTATION

www.qrslouisiana.org/child-care-providers/child-care-center-mental-health-consultation

IMPLEMENTATION OF A MENTAL HEALTH CONSULTATION MODEL AND ITS IMPACT ON EARLY CHILDHOOD TEACHERS' EFFICACY AND COMPETENCE

<http://onlinelibrary.wiley.com/doi/10.1002/imhj.20289/abstract>
<http://onlinelibrary.wiley.com/doi/10.1002/imhj.20289/abstract>

Maryland

MARYLAND EARLY CHILDHOOD MENTAL HEALTH CONSULTATION PROJECT

www.marylandpublicschools.org/MSDE/divisions/child_care/program/ECMH and <http://theinstitute.umaryland.edu/topics/ebpp/ecmhc.cfm>

MARYLAND'S EARLY CHILDHOOD MENTAL HEALTH CONSULTATION EVALUATION: FINAL REPORT

<http://theinstitute.umaryland.edu/topics/ebpp/docs/ECMHC/ECMHC%20Final%20Report.pdf>

Michigan

CHILD CARE EXPULSION PREVENTION PROGRAM

www.michigan.gov/mdch/0,4612,7-132-2941_4868_7145-14785--,00.html

AN INTERDISCIPLINARY EVALUATION REPORT OF MICHIGAN'S CHILDCARE EXPULSION PREVENTION (CCEP) INITIATIVE

<http://outreach.msu.edu/cerc/research/ccep.aspx>



Teachers receiving consultation reported positive results in the areas of improved skills in classroom management and in interactions with children and parents.

Conclusion

THERE IS A growing number of states around the country that recognize that supporting children's social and emotional development is a vital component to school readiness, and that ECMHC is an effective strategy in enhancing children's social and emotional functioning (Gilliam & Shahar, 2006). On the basis of this current review of existing evidence on ECMHC, it appears that current models of ECMHC are effective at improving outcomes for early education classrooms, teachers, and children and are consistent with previous research findings about ECMHC effectiveness. The findings reviewed from the seven states featured in this article provide additional evidence that the investment states have made in supporting child care mental health consultation is paying dividends.

It is important to continuously revisit and share ECMHC research and evaluation findings so that researchers and program leadership can not only stay up to date on the latest findings, but so they can also develop evaluation designs that align with common frameworks and measurement approaches that other ECMHC researchers are using. This alignment can lead to a more unified and

efficient way to build the evidence base. With further collaboration among ECMHC states and their research partners, and continued funding of rigorous evaluation and research, there can be a continued enhancement of the efficacy of services and an establishment of long-term sustainability for this emerging evidence-based practice. ♣

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